

Traffic Signal System Modernization -- No. 500704

Category	Transportation	Date Last Modified	January 10, 2008
Subcategory	Traffic Improvements	Required Adequate Public Facility	No
Administering Agency	Public Works & Transportation	Relocation Impact	None.
Planning Area	Countywide	Status	Preliminary Design Stage

EXPENDITURE SCHEDULE (\$000)

Cost Element	Total	Thru FY07	Est. FY08	Total 6 Years	FY09	FY10	FY11	FY12	FY13	FY14	Beyond 6 Years
Planning, Design, and Supervision	5,763	298	2,177	3,288	548	548	548	548	548	548	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	28,257	19	0	28,238	4,719	4,626	5,266	4,980	4,502	4,145	0
Construction	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Total	34,020	317	2,177	31,526	5,267	5,174	5,814	5,528	5,050	4,693	0

FUNDING SCHEDULE (\$000)

Recordation Tax Premium	19,398	0	0	19,398	3,200	3,200	3,491	3,398	3,119	2,990	0
Current Revenue: General	1,625	317	1,308	0	0	0	0	0	0	0	0
Federal Aid	269	0	269	0	0	0	0	0	0	0	0
G.O. Bonds	600	0	600	0	0	0	0	0	0	0	0
State Aid	12,128	0	0	12,128	2,067	1,974	2,323	2,130	1,931	1,703	0
Total	34,020	317	2,177	31,526	5,267	5,174	5,814	5,528	5,050	4,693	0

DESCRIPTION

This project provided for Phase I which consisted of requirements development, systems engineering, and testing to modernize the County's traffic signal system. The addition of Phase II entails acquisition and implementation of a state-of-the-art replacement of the current central traffic signal control system. Key elements of the modernization include system central hardware and software and communications system cable plant re-configuration.

Anticipated phases of this project include: Phase I - FY07-08. Phase II - FY09-14 - implementation and quality assurance.

COST CHANGE

Based on Phase I findings, Phase II (full implementation of the system) is added to the project. The total project cost for the new system, which includes replacement of the existing functionality and addition of expanded capabilities is \$44M. The expenditure display has been updated to reflect a six-year implementation scenario. The expenditures displayed in FY09-14 (\$31.5M) do not include those costs of the total \$44M system estimate that are associated with the project team's recommendations that will be implemented/expended directly by the Maryland State Highway Administration.

JUSTIFICATION

The existing traffic signal control system, though it has been highly reliable, is an aging system reliant on dated technology. Central and field communications devices are obsolete and problematic to maintain. As the technologies employed in the advanced transportation management system (ATMS) have advanced, it has become increasingly difficult to interface with the existing traffic signal control system (COMTRAC). Because of the limited functionality of the COMTRAC, the system is not able to take advantage of the capabilities of the current generation of local intersection controllers. These capabilities provide a greater level of flexibility to manage traffic demands.

The following reports focus on the condition of the current traffic signal control system and document the need to begin the process of system modernization: White Paper on the Status and Future of the Traffic Signal System in Montgomery County, Maryland, March, 2001; and Traffic Signal Replacement White Paper, January, 2002. The following new reports have been developed in Phase I: Concept of Operations, Revision 1.0 February, 2007; Traffic Signal System Modernization (TSSM) Requirements, Draft Revision F, May, 2007. These two reports further existing systems analysis and replacement systems functional requirements development. Working in conjunction with the Department of Technology Services (DTS), a comprehensive communications master plan is underway to review the existing communications subsystem and development of state-of-the-art communication systems architecture.

OTHER

Phase I Status (As of August 2007)

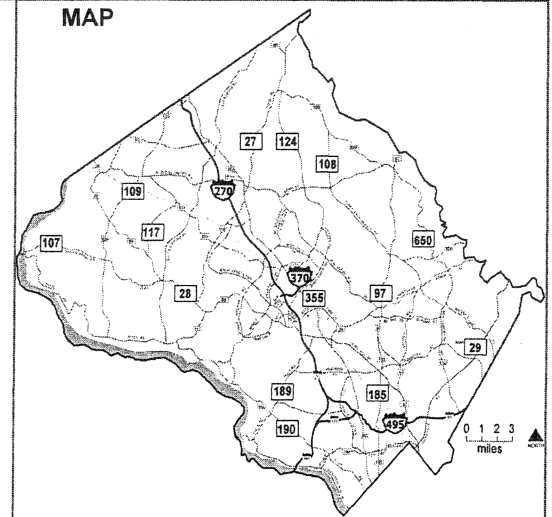
APPROPRIATION AND EXPENDITURE DATA

Date First Appropriation	FY07	(\$000)
First Cost Estimate		
Current Scope	FY09	34,020
Last FY's Cost Estimate		2,600
Appropriation Request	FY09	3,094
Appropriation Request Est.	FY10	3,200
Supplemental Appropriation Request		0
Transfer		0
Cumulative Appropriation		2,600
Expenditures / Encumbrances		1,355
Unencumbered Balance		1,245
Partial Closeout Thru	FY06	0
New Partial Closeout	FY07	0
Total Partial Closeout		0

COORDINATION

Traffic Signals Project
Advanced Transportation Management
System
Maryland State Highway Administration

MAP



Traffic Signal System Modernization -- No. 500704 (continued)

Concept of Operations - 100% complete/configuration control
System Requirements - 100% complete/configuration control
Communications Master Plan - 65% complete
Field Inventory - 90% complete
Risk Analyses and Contingency Planning - 5% complete
Cost Estimate and Implementation Plan - 25% complete

FISCAL NOTE

The County's traffic signal system supports over 800 traffic signal locations, of which more than 550 belong to the State but are maintained by the County on a reimbursement basis. The State Aid displayed in the funding schedule is subject to Maryland State Highway Administration budget approval.

Operating Budget Impacts are expected as a result of this project and will be identified as the project continues to develop.

OTHER DISCLOSURES

- The Executive asserts that this project conforms to the requirements of relevant local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.